

MEETING MINUTES 11/13 (Design Review)

Present:

Emily

Jake

Dr. Rezaie

Ray (virtually)

Mellissa

Note: See Design review Presentation for more information

Working fluid Solar Concentrator

- Vegetable oil might be good choice
- concerns-degradation of oil
- 250°C upper temp. limit
- can we UH Used Vegetable oil? (then we can use food waste from Cafeteria)
 - ↳ That would also be an example of CCUS
- Vegetable Oil also doesn't corrode as much So the pipes could be steel

Thermal Storage Analysis

Current Analysis:

- 1m x 1m x 1m test bed
- 1-5cm grain size
- calculating by solving 1 layer@ a time

Which Direction will we take this?

- Ra-Wants both Emily and Jake to want to do this
- Ra-most Unique part is using the mining waste rock
 - ↳ wants to learn about below ground
- consider using Vegetable oil instead of CO₂
 - ↳ it's a reducer so the interaction of water, oil , and rock

Decision:

Going forward: Heat the rock!!

Ja- are there any limitations for what makes it?

↳ Ra-Come up w/ your own design for test bed

Wants cheap material like crushed Basalt (best for Palouse)

We could do some more experimentation

<note: switching between fluid Changes pumps (also Vegetable oil would need filler, Check residue)

Find cost of below ground components

To Do: Price

↳ then build:

- Propane cheapest way to heat (on site)
- 20ft² w/ 11 ft. ceiling 220V power
- Concrete floor

Ask for lead times on products. How much Shipping to handling is to Moscow

Add Timeline